(b) *Geologists of Atomic Minerals* Division have discovered during the period of 1988 to 1991 low order uranium occurrences associated with phosphatic and volcanic rocks. These are in the vicinity of Samteran and Ganjang villages in Central Mikir Hills and around Barpung village in the Northern part of Mikir Hills.

Fire at Kakrapar Atomic Power Plant, Surat

2047. SHRI KRISHNA KUMAR BIRLA: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that major fire broke out at the Kakrapar Atomic Power Plant at Surat in the month of October this year;

(b) if so, the estimated loss caused by the fire;

(c) what was the cause of the fire and whether Government have since taken any concrete steps to avoid recurrence of such incidents in future; and

(d) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS (SHRIMATI MARGARET ALVA): (a) There was a localised fire incident in September 1991 (not related to any nuclear system) at the Project.

(b) Between Rs. 70 lakhs to Rs. 100 lakhs.

(c) and (d) The fire was traced to a problem in the medium voltage switchgear of the first Unit. A Committee has been constituted by Managing Director to investigate and suggest remedial measures. On the basis of the interim report, the systems have been restored to normalcy and commissioning works are in progress. Final report of the Committee is expected by December 1991 and the recommendations will be implemented.

Use of plutonium as fuel in atomic reactors

2048. SHRI MURLIDHAR CHANDRAKANT BHANDARE: Will the PRIME MINISTER be pleased to state:

(a) whether Government's attention has been drawn to the observations of the Chairman, Atomic Energy Commission, made at a symposium at Bombay on February 12, 1991, that plutonium technology is the real answer to the energy crunch the country was facing following the Gulf war;

(b) if so, the steps taken so far and the progress made in this regard; and

(c) the future plan to use plutonium as fuel if any?

THE MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS (SHRIMATI MARGARET ALVA): (a) Yes, Sir. The over dependence on foreign oil resources to meet the energy crisis in our country, has become obvious after the Gulf war. This crisis can be only solved by Nuclear Technology using our own resources. The first stage of our nuclear programme is based on Pressurised Heavy Water Reactors which will produce plutonium. This plutonium would be used in Fast Breeder Reactors for which research is being carried out at Indira Gandhi Centre for Atomic Research, Kalpakkam.

(b) and (c) Two plutonium plants have been established at BARC and Tarapur which reprocess the spent fuel from our research reactors at BARC and from power plants at Tarapur and Rajasthan. Presently third Plutonium plant is being established at Kalpakkam to process spent fuel from Madras Atomic Power Station and Fast Breeder Test Reactor at Kalpakkam. Considerable R&D work is being carried out at BARC on the fabrication of plutonium based nuclear fuels. As a first step a mixed monocarbide of uranium and plutonium has been fabricated for use in Fast